

Applic. No. 10/763,027
Amdt. dated April 28, 2008
Reply to Office action of February 26, 2008

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Claim Amendments

This listing of the claims will replace all prior versions,
and listings, of claims in the application:

Claim 1 (currently amended): A honeycomb body, comprising:

a housing;

a matrix having an average initial diameter and connected to
said housing; and

at least one contraction limiter configured for imparting an
outwardly directed tensile stress in at least one part of said
matrix for preventing the average initial diameter of said
matrix from decreasing by more than 5% during and/or after a
thermal stress, and said contraction limiter having a surface-
specific heat capacity ~~greater than~~ between a surface-specific
heat capacity of said matrix and said housing, such that said
contraction limiter begins to deform only in a higher
temperature range in comparison with said matrix and begins to
deform in a lower temperature range in comparison with said
housing.

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Claim 2 (original): The honeycomb body according to claim 1, wherein said matrix is connected to said housing by said at least one contraction limiter.

Claim 3 (original): The honeycomb body according to claim 1, wherein said at least one contraction limiter has a first end region connected to said matrix resulting in a formation of a connecting region, and a second end region connected to said housing resulting in a formation of a fastening region.

Claim 4 (original): The honeycomb body according to claim 1, wherein:

said at least one contraction limiter and said matrix have a common connecting region; and

said matrix has walls connected to one another by joining connections, the tensile stress being applied through said common connecting region and corresponding at most to an average strength of said joining connections of said walls to one another and/or to an average strength of said walls themselves.

Claim 5 (original): The honeycomb body according to claim 1, wherein the tensile stress produced by said at least one

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contraction limiter is effective in a temperature range of
from -40° C to 1050° C.

Claim 6 (original): The honeycomb body according to claim 1,
wherein said at least one contraction limiter and said matrix
have a common connecting region, said common connecting region
is disposed close to an end side of said matrix.

Claim 7 (original): The honeycomb body according to claim 1,
wherein said matrix and said housing define an annular gap
between them and surrounding said matrix, and said at least
one contraction limiter seals said annular gap surrounding
said matrix.

Claim 8 (original): The honeycomb body according to claim 1,
wherein:

said matrix has a circumference; and

said contraction limiter is one of a plurality of contraction
limiters disposed axially one behind another, with an offset
with respect to one another in a direction of said
circumference of said matrix.

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Claim 9 (original): The honeycomb body according to claim 1, wherein said at least one contraction limiter and said matrix are formed from different materials.

Claim 10 (original): The honeycomb body according to claim 1, wherein said matrix is thermally insulated with respect to said housing.

Claim 11 (original): The honeycomb body according to claim 1, wherein said at least one contraction limiter has a coefficient of thermal expansion which is different from said matrix.

Claim 12 (original): The honeycomb body according to claim 1, wherein said matrix has walls formed of at least partially structured sheet-metal foils stacked and/or coiled forming channels through which a gas can flow.

Claim 13 (original): The honeycomb body according to claim 12, wherein said matrix is at least partially surrounded by an outer structured foil.

Claim 14 (original): The honeycomb body according to claim 12, wherein said sheet-metal foils have a thickness of less than 0.06 mm.

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Claim 15 (original): The honeycomb body according to claim 12, wherein said matrix has a channel density greater than 600 cells per square inch.

Claim 16 (original): The honeycomb body according to claim 1, further comprising a catalytically active coating disposed on said matrix.

Claim 17 (original): The honeycomb body according to claim 1, wherein said at least one contraction limiter has means for preventing crack propagation.

Claim 18 (original): The honeycomb body according to claim 12, wherein said sheet-metal foils have a thickness of less than 0.03 mm.

Claim 19 (original): The honeycomb body according to claim 12, wherein said matrix has a channel density greater than 1000 cells per square inch.

Claim 20 (original): The honeycomb body according to claim 12, wherein said matrix is at least partially surrounded by an outer structured foil that at least partially forms said at least one contraction limiter.

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Claim 21 (original): The honeycomb body according to claim 6, wherein said common connecting region is disposed a distance to said end side of said matrix in a direction of an axis of said matrix.

Claim 22 (original): The honeycomb body according to claim 21, wherein said distance to said end side is less than 20 mm.

Claim 23 (original): The honeycomb body according to claim 21, wherein said distance to said end side is less than 10 mm.

Claim 24 (original): The honeycomb body according to claim 8, wherein said plurality of contraction limiters are flexible in a direction of an axis of said matrix for allowing a free axial contraction and expansion of said matrix.

Claim 25 (original): The honeycomb body according to claim 1, wherein the honeycomb body is used in an exhaust system of an internal combustion engine.

Claim 26 (original): The honeycomb body according to claim 1, wherein said matrix is a metallic matrix.

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Claim 27 (original): The honeycomb body according to claim 1,
wherein the average initial diameter of said matrix decreases
by at most 2% during and/or after the thermal stress.